

**From:** Michael Niles  
**To:** [Michael Niles](#)  
**Subject:** Comprehensive CTEH Hurricane Capabilities  
**Date:** Tuesday, August 29, 2017 3:38:50 PM  
**Attachments:** [image002.jpg](#)  
[Mike Niles.vcf](#)  
[CTEH Hurricane Capabilities-2017.pdf](#)

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Good Afternoon,

Our prayers are with all the families along the Gulf Coast that have been impacted in so many ways during this past week. I know we as a country, city and community will come back stronger.

As you prepare for the weeks ahead, I am sending the attached flyer of our capabilities to help and support you and your organization if needed. If CTEH can assist in any way, please feel free to contact us.

Stay safe and God bless.

Mike Niles

Major Projects Team Consultant

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Toxicology Emergency Response 24-Hour Hotline: 1-866-869-2834

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[www.insidecteh.com](http://www.insidecteh.com)







# HURRICANE RESPONSE CAPABILITIES



CENTER FOR TOXICOLOGY  
AND ENVIRONMENTAL HEALTH, LLC





CTEH specializes in hazardous materials and disaster management. We have a team of 150 full time professionals and an additional 400+ project-based CTEH affiliates who provide consulting and management for events such as the flooding event in Louisiana. We have a team on the ground in Katy, Texas, Baton Rouge, Louisiana and additional resources located in New Orleans as well as nearby locations in Texas and Arkansas.

Our flood response services include:

#### Health & Safety/Industrial Hygiene

- Certified Industrial Hygienists/Certified Safety Professionals
- Air monitoring capabilities for spills of product
- Asbestos/Lead - Air sampling capabilities prior to removal and remediation
- Mold - Air sampling, testing, moisture testing - post remediation and reoccupation
- Site safety/safety observation/heat stress management
- PPE selection
- Biologicals, chemicals, and physical hazard evaluation and mitigation

#### Environmental/Site Assessment/Remediation/Rehabilitation

- Overall remediation/abatement project management and contractor oversight.
- Property assessment, drinking water sampling
- Environmental sampling (all media)
- Fixed facilities - environmental sampling to determine no leaks to flooded waters, downstream creeks and rivers.
- Contaminated site characterization.
- Site remediation plan/design.
- Laboratory coordination - labs on standby for timely delivery of results
- Risk assessment for site cleanup requirements.

#### Response Management/ICS/Incident Management Assistant Team

- Incident Management Assistance Team (Incident Commander, Operations, Sections Chiefs, Safety Officers, Environmental Unit Leads, etc)
- Advance onsite and online management, documentation, and cost tracking capabilities for audit and insurance purposes
- Asset tracking, rostering
- Situational Awareness - Quadcopter Imagery for birds-eye-view site assessments and documentation [Have pilots license, see detailed information on following pages].

#### Toxicology/Specialty Consulting

- Waste characterization and disposal management (identify best source for disposal and coordinate with state and EPA to obtain approval for disposal option)
- Experienced professionals for addressing chemical mixtures and addressing health and safety requirements for the mixtures.
- Product identification for rogue drums, containers, etc.

#### Occupational Health/Emergency Medicine

- Health services for clean-up workers - on site vaccinations, respirator fit testing, first aid
- Emergency/Occupational Health consulting services from Board Certified Medical Doctors

#### EMERGENCY LOGISTICS SUPPORT

Transportation

Call Center setup and staffing

Mobile Command Centers

Temporary lodging

IT equipment

Planes & helicopters on standby

Fans & Drying equipment

# RESOURCE TRACKING

CTEH provides a robust suite of automated solutions to efficiently track personnel, heavy machinery, equipment, and more. The combination of a web application, mobile technology, badge printers and barcode scanners enable CTEH to rapidly track thousands of resources. CTEH's solution automates the mundane tasks that are traditionally done with paper and spreadsheets.

## PERSONNEL

CTEH provides a comprehensive and customized personnel badging solution that allows you to register, print, and process hundreds of personnel per hour across multiple sites simultaneously.

- Rostering
- Credentialing

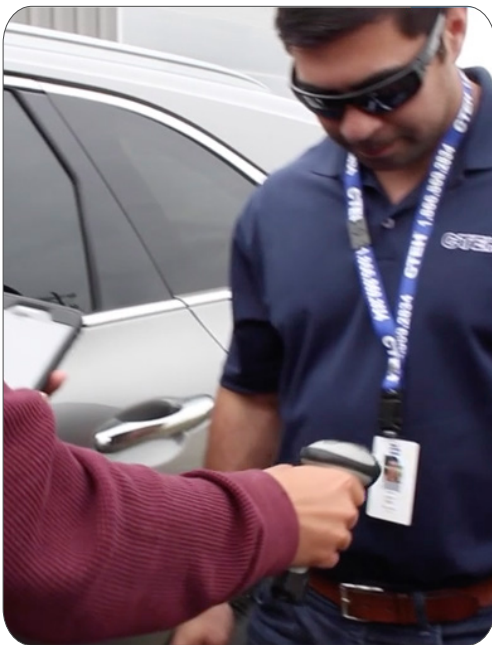
## FIXED ASSETS

Monitor equipment through real-time dashboards to determine whether you have enough equipment for your staff. The ability to break down usage by GPS location, department, individual, or contractor helps ensure you are able to adjust budgets and deploy assets accordingly.

- Laptops, smart phones, tablets
- Hardware & machinery
- Fleet Vehicles
- Medical equipment
- Storage Containers
- Construction tools

## REPORTING AND VISUALIZATION

CTEH Resource Tracking allows you to monitor daily reports to keep stakeholders informed of the common operating picture. Our unique visualization helps team members make critical business decisions around facts, rather than guesses.







Response Portal - IA-MN Avian Flu Response

Equipment: Excavator - BOX15584

Show Equipment Resource

Edit Add Resource Container Item Add Resource Container Quantity

 Photo	 Badge Number Photo	 Vendor Number Photo	 Mfg Number Photo
<b>Equipment Details</b> Badge Number: BOX15584 Organization: Clean Harbors Rented From: Blank Mfg Number: 833212198 Vendor Number: 10300805 Site: Plymouth 01 Resource Type: Equipment/Excavator Equipment Descri...: Blank Billable: Not Set (calculated as Billable) Billable To: Blank Itemized Qty: Blank Bulk Qty Sum: Blank	<b>Container Items</b> No items to list	<b>Container Quantities</b> No items to list	

Resource Checks Duplicates External Resources Versions

# CTEH MEDICAL RESPONSE

CTEH's Occupational Health Nurses provide emergency response nursing services to assist workers responding to natural disasters (post-hurricane, post-flooding, etc.).



**CTEH's Medical team can and have performed the following duties following a catastrophic hurricane:**

## On-Site First Aid Stations

- CTEH can set up an air-conditioned trailer at large worker population work sites and provide first aid.
- With no medical care, no hospitals open, no doctors' offices open, CTEH is prepared to be the only medical team around.
- As workers start to clean up the affected sites, CTEH can move with them and provide on site care.
- Our presence meant workers did not have to leave the area to find medical care. This assisted in keeping reportable injuries at a minimum.
- Provide first aid - minor cuts, scrapes, burns, gout, nail in foot, cut hand on rail track, heat related illnesses, dehydration, bug bites, ticks.
- Identify and coordinate with local medical physician to serve as contact with questions or treatment of workers beyond first aid.

## Safety/Training

- Provide over the counter medications such as Tylenol, Motrin, cold tablets, etc
- Prepare handouts such as what to do if you are bite by snake.
- Provide safety training and briefings to crews as they went to work on topics such as heat stress, hazards (snakes, gators, mosquitoes, live electrical wires, submerged debris, etc.).
- Encourage workers to report even small wounds to nursing staff to insure they are treated and prevent infection developing.
- Identify and coordinate with local medical physician to serve as contact with questions or treatment of workers beyond first aid.
- Attend and provide input as needed during safety briefings.

## Documentation

- Log all incidents and organize information per company.
- Establish a hot-line designated for workers to call for assistance and logged all calls.

## Worker Observation/Daily Care

- Provide Hepatitis A vaccine and Tetanus vaccines.
- Observe workers for heat exposure.
- Distribute supplies such as DEET, sun block, hand sanitizer, bottled water, Gatorade packets, and safety equipment such as gloves, snake chaps, buckets of sanitizing wipes, reflector vests, eye protection, and rubber boots.
- Care for diabetic workers, checked their blood glucose, provided glucose tablets
- Support workers during the stress, long hours and fatigue. CTEH Nurses recognize this will increase the worker for risk for injury or illness.
- Schedule hand washing stations to set up near portable bathrooms, food tents, etc., and encourage hand washing before eating, smoking or drinking
- Observe workers for proper PPE (safety vests, hard hats, rubber boots, etc)
- Recognize when workers are at risk for developing injuries to their hands, feet, back and provide preventative feedback.

## READINESS RE-CAP

CTEH® has strategically staged expert personnel and emergency resources in and around Texas and Louisiana to meet the needs of your organization, should external resources be necessary to respond to, and recover from Hurricane Harvey and its aftermath. Below is a summary of emergency resources available for immediate deployment:

- On-call response professionals including: Certified Crisis Management Professionals, Environmental Scientists, Toxicologists, Physicians, Registered Nurses, Certified Industrial Hygienists, and IT/Data Managers;
- Contracted pilots, planes and helicopters on standby for logistics support and accessibility to difficult to reach locations;
- FCC-certified UAV pilots and state-of-the-art UAVs for aerial imagery, assessment, and situational awareness;
- Emergency response trained medical team for hazard assessment and on-site first aid support (e.g., respirator fit testing, vaccinations, extremity assessment and wound care, heat stress management, etc.) and training (e.g., blood borne pathogen, 8 hour OSHA, etc)
- Qualitative and quantitative direct-read instruments and analytical sample containers to determine, document and litigate chemical concentrations in a variety of media (e.g., air, soil, water, sediments);
- Indoor Air Quality (IAQ) kits to assess indoor conditions necessary for re-occupancy of affected structures;
- Badging and scanning devices and software to accurately track personnel and resources throughout the site and exclusion zones for accountability and aid in cost recovery and insurance claims

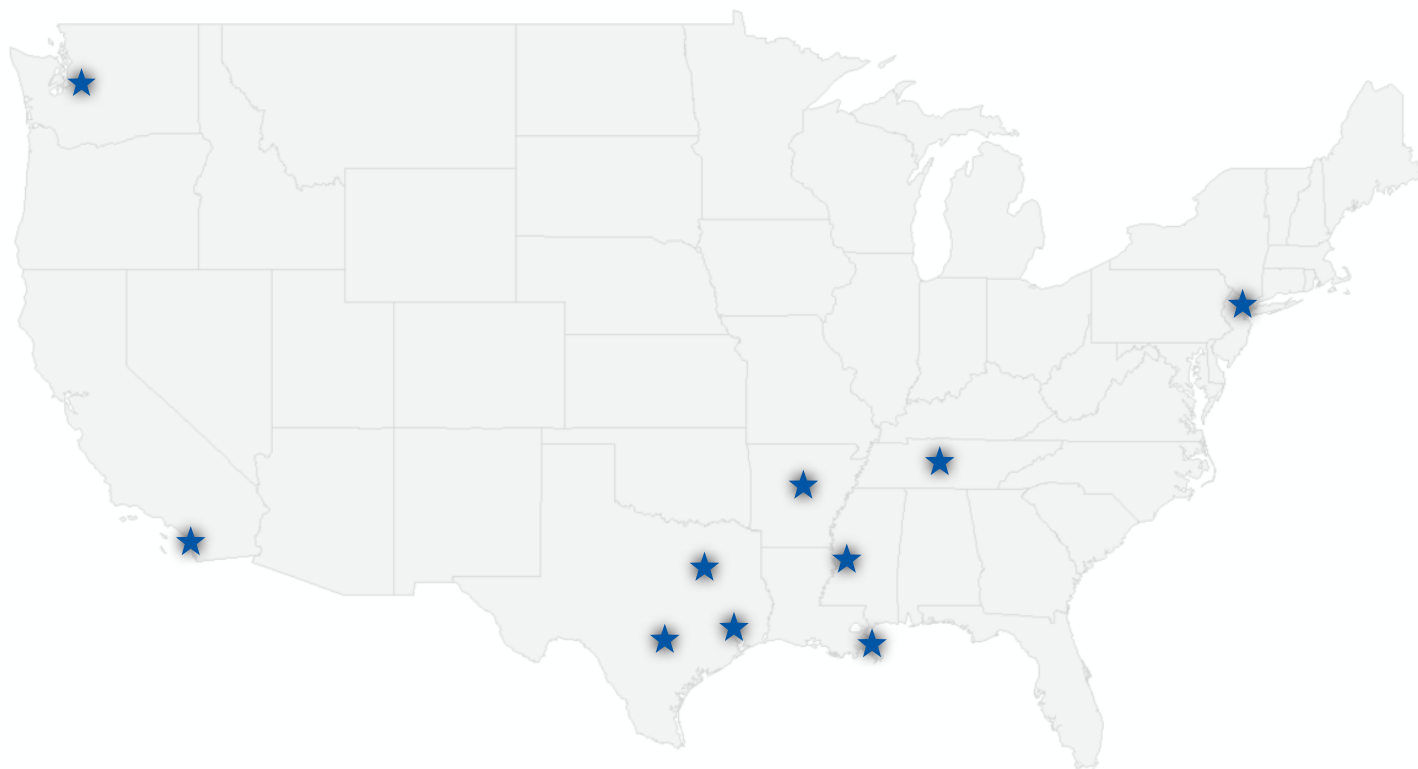
## FIELD OFFICES SERVING CONTINENTAL NORTH AMERICA



CENTER FOR TOXICOLOGY  
AND ENVIRONMENTAL HEALTH, LLC

CTEH®'s locations provide rapid response capabilities for our clients.

For 24-hour emergency response call our **Toxicology Emergency Response 24-Hour Help Desk: +1.866.869.2834.**



### MAIN OFFICE LOCATIONS

#### LITTLE ROCK, AR

5120 North Shore Drive  
North Little Rock, AR 72118

**P** 501.801.8500

**F** 501.801.8501

webquestion@cteh.com

#### NEW ORLEANS, LA

2400 Veterans Blvd., Suite 212  
Kenner, LA 70062

**P** 504.308.1367

**F** 504.274.2492

nola@cteh.com

#### HOUSTON, TX

2000 Anders Lane  
Kemah, TX 77565

**P** 281.535.2834

**F** 281.535.0232

kemah@cteh.com

#### JACKSON, MS

660 Lakeland East, Ste. 107  
Jackson, MS 39232

**P** 601.278.7814

**F** 501.801.8501

jackson@cteh.com

### ADDITIONAL LOCATIONS

DALLAS, TX  
P 469.206.5977

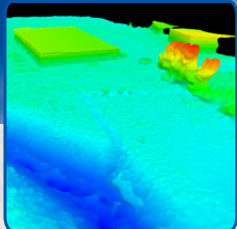
SAN ANTONIO, TX  
P 210.446.6240

SAN DIEGO  
P 858.304.1165

SEATTLE  
P 253.336.5957

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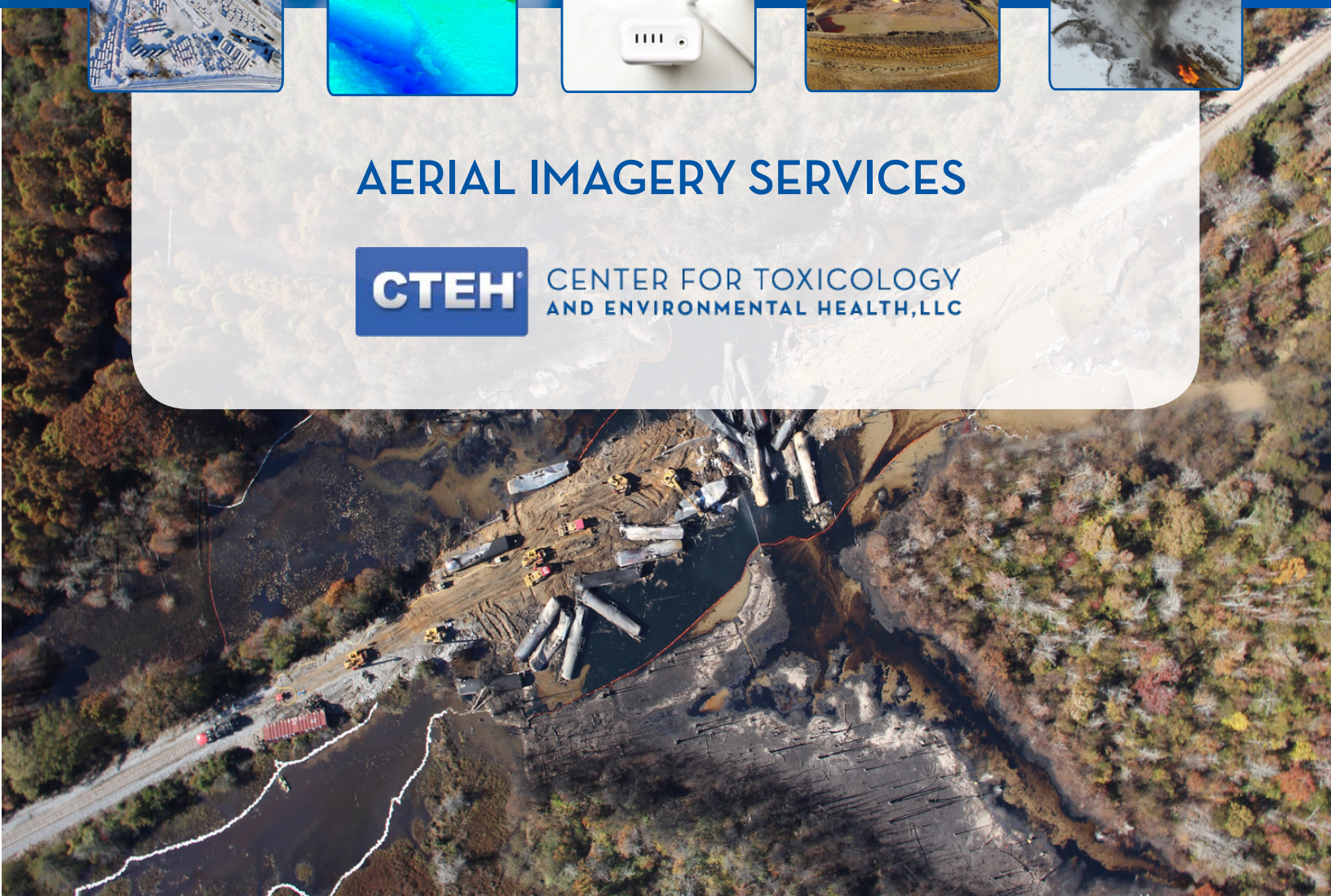




## AERIAL IMAGERY SERVICES



CENTER FOR TOXICOLOGY  
AND ENVIRONMENTAL HEALTH, LLC





CTEH® utilizes 20+ years of response and emergency management experience, combined with expertise in data management, to bring data science to a higher level. Our team is made up of seasoned, academic, third-party consultants who are experienced in dealing with environmental challenges faced by your industry, regulators, the general public, and claims.

Our data management and software development teams rapidly collect, transform, and visualize data into concise, custom developed project dashboards, detailed maps, and guided mobile applications for stakeholders, including aerial imagery and video - providing situational awareness during a crisis or planned event.

### UNMANNED AERIAL VEHICLE (UAV) PILOTS

CTEH®'s UAV pilots have remote pilot airman certificates issued by the FAA in compliance with part 107 of Title 14 Code of Federal Regulations. Our operations are insured and our pilots are experienced in working within hazardous environments and emergency response events. Additional response training they receive includes:

- 40 Hour Hazwoper
- ICS 100, 200, 300
- Industry Specific Safety Training

CTEH®'s UAV pilots have experience flying in a variety of operational conditions (confined perimeters of industrial plants, over water, icy terrain, and mountains) and can



deploy during emergency or scheduled conditions. Our imagery services can assist with, but not limited to:

- Emergency response
- Environmental due diligence
- Tactical response plans
- Litigation support

CTEH® UAV pilots capture timely and relevant imagery of the current situation and georeference the data using industry standard GIS tools to provide accurate scale for measuring and locating important resources. A typical mission takes approximately 20 minutes to complete, and imagery for scheduled flights can be delivered by requested deadlines.





## AERIAL IMAGERY IN EMERGENCY RESPONSE

Today's technology offers more options in emergency response or disaster relief situations than ever before – from speed and cost efficiency to quality of imagery. CTEH® can rapidly collect and disseminate aerial information among members of Incident Command and/or those overseeing the emergency response.

Aerial imagery enhances situational awareness for stakeholders involved in the planning and decision making process to be more informed by providing holistic views of the site(s). Immediately following the flight, content is uploaded to a secure and accessible online dashboard creating:



**Overall  
Transparency**



**Hazard  
Identification**



**Progress  
Tracking**

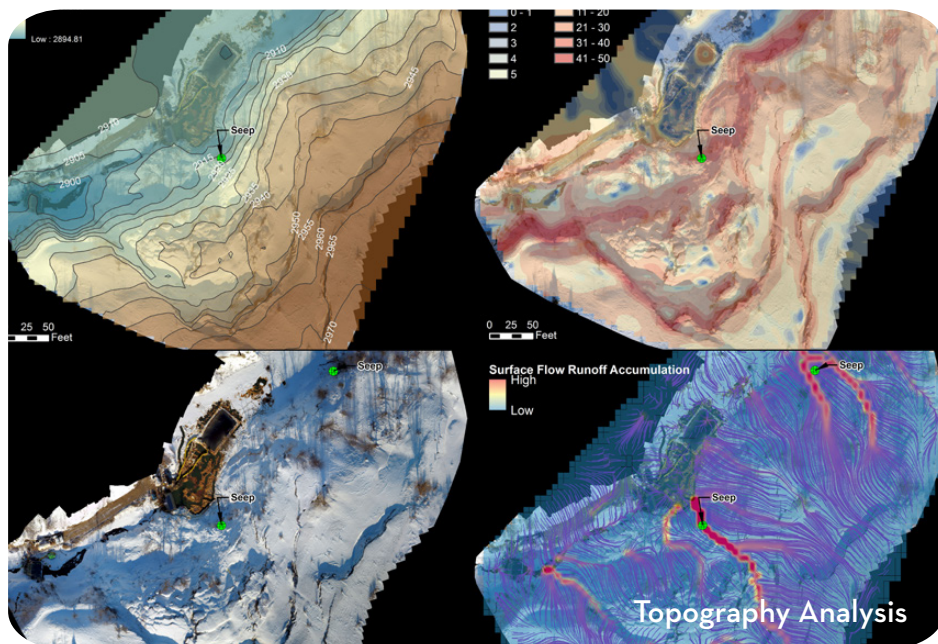


**Auditing**  
*(personnel  
& equipment)*



**Site  
Documentation**

During an emergency response, a data analyst can collect the imagery and post process it on-site. A large-scale high-resolution map is typically delivered within 2-3 hours of the initial flight.



## VIDEO SURVEILLANCE

When physical access to a site is limited by geographic obstacles (ie, heavy terrain) or worker safety concerns, our aerial 4k video platform gives stakeholders situational awareness without bringing in additional tactical resources. Benefits video surveillance offers includes:

1. Potential hazard identification for responder and worker protection
2. Monitor responders during relief efforts to quickly respond to rapidly changing conditions
3. Terrain mapping (particularly helpful after flooding)
4. Take cameras where people can't go

## 3D MODELING

Aerial imagery collected can be further processed to provide a 3D model of the site and surrounding areas. Processing and production takes 3-4 hours to complete. Advantages of having a 3D model include:

1. Drainage Identification
2. Volume Calculations
3. Site Characterization Support
4. Slope and Surface Flow Run-off Accumulation
5. Data can be shared in standard formats to other applications